



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,846	09/25/2003	Eugene George Olczak	133074-1	8697

43253 7590 07/08/2009  
SABIC - 08CS - STRUCTURED PRODUCTS  
SABIC Innovative Plastics - IP Legal  
ONE PLASTICS AVENUE  
PITTSFIELD, MA 01201-3697

EXAMINER
----------

CHEVALIER, ALICIA ANN

ART UNIT	PAPER NUMBER
----------	--------------

1794

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

07/08/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

colleen1.brennan@sabic-ip.com  
henry.gibson@sabic-ip.com  
jian.zhou@sabic-ip.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/671,846	<b>Applicant(s)</b> OLCZAK ET AL.	
	<b>Examiner</b> ALICIA CHEVALIER	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-13, 29-33 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-13, 29-33 and 35-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **RESPONSE TO AMENDMENT**

1. Claims 2-13, 29-33 and 35-38 are pending in the application, claims 1, 14-28 and 34 have been cancelled.

## ***REJECTIONS***

2. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 2-13, 29-33 and 35-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case claims 2-13, 29-33 and 35-38 contain the limitations “backlighting display,” “a first backlighting display component film,” and “a second backlighting display component film.” The specification does disclose a backlight display or backlighting display component films, therefore this limitation is considered new matter. The only support in the specification regarding “backlighting” is in the background of the invention

Art Unit: 1794

on page 1, line 13 and 21-22, where it discloses prior art stack optical devices are used in applications such as liquid crystal display (LCD) backlighting. There is no disclosure in Applicant's summary of the invention or the detailed description of the invention that the multilayer optical film of the instant invention is a "backlighting display" or has backlighting display component films. Applicant only has support for "multilayer optical film" and component films, page 3, lines 11-12. The new matter should be deleted.

5. Claims 2-13, 29-33 and 35-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case claims 33 and 35-38 contain the limitations "wherein said gap is greater than the coherent length of light used to illuminate said optical film." The specification does not disclose an illumination source providing illumination to the multilayer backlighting display optical film, therefore this limitation is considered new matter. The only support in the specification regarding this concept is on page 7, lines 12-14, where it discloses what has already been claimed "the gap between surfaces should be greater than the coherent length of the light source, typically no less than a few microns." No where in the specification does it disclose an embodiment where an illumination source is provided for the multilayer optical film. The new matter should be deleted.

6. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

Art Unit: 1794

the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case claim 35 contains the limitation “a backlighting illumination source providing illumination to the multilayer backlighting display optical film.” As discussed above “backlighting” is only discussed in the background of the invention in the specification. Also, the specification does not disclose an illumination source providing illumination to the multilayer backlighting display optical film, therefore this limitation is considered new matter. The only support in the specification regarding this concept is on page 7, lines 12-14, where it discloses what has already been claimed “the gap between surfaces should be greater than the coherent length of the light source, typically no less than a few microns.” No where in the specification does it disclose an embodiment where an illumination source is provided for the multilayer optical film. The new matter should be deleted.

7. Claims 30 and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case claims 30 and 36 contains the limitation “wherein at least one of said first backlighting display component film or said second backlighting display component film is a brightness enhancement film.” As discussed above “backlighting” is only discussed in the background of the invention in the specification. Also, the only support in the specification regarding a “brightness enhancement film” is on page 1, lines 20-22, where it discloses in the background of the invention that prior art stacked optical devices, diffusers, brightness enhancement films, and polarization recycling films have been used in the assembly of LCD

Art Unit: 1794

backlighting devices.” No where in the summary of the invention or the detailed description of the invention does Applicant describe an embodiment with brightness enhancement films. The new matter should be deleted.

8. Claims 31 and 37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case claims 31 and 37 contains the limitation “wherein at least one of said first backlighting display component film or said second backlighting display component film is a polarization recycling film.” As discussed above “backlighting” is only discussed in the background of the invention in the specification. Also, the only support in the specification regarding a “polarization recycling film” is on page 1, lines 20-22, where it discloses in the background of the invention that prior art “stacked optical devices, diffusers, brightness enhancement films, and polarization recycling films have been used in the assembly of LCD backlighting devices.” No where in the summary of the invention or the detailed description of the invention does Applicant describe an embodiment with polarization recycling films. The new matter should be deleted.

9. Claims 32 and 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case claims 32 and 38 contains the limitation “said component films

Art Unit: 1794

being configured such that the optical structures of said component films are configured orthogonally.” The only support in the specification regarding anything being “orthogonal” is on page 10, lines 24-27, recites “this square of film #2 is positioned such that the axes of the embossed structures (prisms and raised ridges) are arrayed in an approximately orthogonal manner with respect to each square of film #2 employed.” While this section is vague it appears to states that features on film #2 are orthogonal to each other not that film #1 is orthogonal to film #1. The new matter should be deleted.

10. Claims 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case claim 29 contains the limitation “wherein at least one of said first backlighting display component film or said second backlighting display component film is a diffuser.” As discussed above “backlighting” is only discussed in the background of the invention in the specification. Also, the only support in the specification regarding a “diffuser” is on page 1, lines 20-22, where it discloses in the background of the invention that prior art “stacked optical devices, diffusers, brightness enhancement films, and polarization recycling films have been used in the assembly of LCD backlighting devices.” No where in the summary of the invention or the detailed description of the invention does Applicant describe an embodiment with diffusers. The new matter should be deleted.

Art Unit: 1794

11. Claims 2-13, 29-33 and 35-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “backlighting display” in claims 2-13, 29-33 and 35-38 is unclear and renders the claims vague and indefinite. As discussed above the disclosure regarding “backlighting” is in the background of the invention on page 1, line 13 and 21-22, where it discloses prior art stack optical devices are used in applications such as liquid crystal display (LCD) backlighting. Since Applicant's invention is not directed to a liquid crystal display it is unclear what encompasses a “backlighting display” in regard to only a multilayer optical film as described in Applicant's summary of the invention and detailed description of the invention.

The term “brightness enhancement film” in claims 30 and 36 is unclear and renders the claims vague and indefinite. It is unclear what structure or composition encompasses a brightness enhancement film since the specification does not describe one and only briefly refers to their use in the assembly of LCD backlighting devices. Furthermore, on page 1, lines 20-22, in the background of the invention where it recites “stacked optical devices, diffusers, brightness enhancement films, and polarization recycling films have been used in the assembly of LCD backlighting devices,” it appears to imply that stacked multiple layer films like those described in Applicant's summary of invention and detailed description of the invention are completely different types of films than brightness enhancement films.

Claims 30 and 36 are indefinite because they fail to set forth the composition or structure of the “brightness enhancement film” and only claim properties of the “brightness enhancement film”. Claims that merely set forth physical characteristics desired in an article, and not setting



Art Unit: 1794

forth specific compositions which would meet such characteristics are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in the future. Ex parte Slob (PO BdApp) 157 USPQ 172.

The term “polarization recycling film” in claims 31 and 37 is unclear and renders the claims vague and indefinite. It is unclear what structure or composition encompasses a polarization recycling film since the specification does not describe one and only briefly refers to their use in the assembly of LCD backlighting devices. Furthermore, on page 1, lines 20-22, in the background of the invention where it recites “stacked optical devices, diffusers, brightness enhancement films, and polarization recycling films have been used in the assembly of LCD backlighting devices,” it appears to imply that stacked multiple layer films like those described in Applicant's summary of invention and detailed description of the invention are completely different types of films than polarization recycling films.

Claims 31 and 37 are indefinite because they fail to set forth the composition or structure of the “polarization recycling film” and only claim properties of the “polarization recycling film”. Claims that merely set forth physical characteristics desired in an article, and not setting forth specific compositions which would meet such characteristics are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in the future. Ex parte Slob (PO BdApp) 157 USPQ 172.

The term “diffuser” in claim 29 is unclear and renders the claims vague and indefinite. It is unclear what structure or composition encompasses a diffuser since the specification does not

Art Unit: 1794

describe one and only briefly refers to their use in the assembly of LCD backlighting devices.

Furthermore, on page 1, lines 20-22, in the background of the invention where it recites “stacked optical devices, diffusers, brightness enhancement films, and polarization recycling films have been used in the assembly of LCD backlighting devices,” it appears to imply that stacked multiple layer films like those described in Applicant's summary of invention and detailed description of the invention are completely different types of films than diffusers.

Claim 29 is indefinite because they fail to set forth the composition or structure of the “diffuser” and only claim properties of the “diffuser”. Claims that merely set forth physical characteristics desired in an article, and not setting forth specific compositions which would meet such characteristics are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in the future. *Ex parte Slob* (PO BdApp) 157 USPQ 172.

### ***Claim Rejections - 35 USC § 102***

12. Claims 2-13, 29-33 and 35-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al. (U.S. Patent Application Publication No. 2002/0009573).

Regarding Applicant's claims 29-33 and 35-38, Kimura discloses an optical device (*page 1, paragraph [0001]*) comprising a multilayer backlighting display optical film (*page 1, paragraphs [0001] and [0013]*), said film comprising: a first backlighting display component film having an upper surface and a lower surface, said upper surface of said first backlighting display component film comprising a series of optical structures (*smaller resin particles*) and a plurality of raised spacing structures (*larger resin particles*), said lower surface being essentially

Art Unit: 1794

planar (*figure 3*); and a second backlighting display component film having an upper surface and a lower surface, said upper surface of said second backlighting display component film comprising a series of optical structures (*smaller resin particles*), said raised spacing structures contacting said lower surface of said second backlighting display component film and providing a gap between said series of optical structures of said first backlighting display component film and said lower surface of said second backlighting display component film (*figure 3*).

Furthermore, the gap is deemed to be greater than the coherent length of light used to illuminate the optical film since the reference discloses that same height for the spacing structures (*page 2, paragraph [0015]*) as claimed by Applicant. See the discussion below regarding claim 7. Furthermore, Applicant's specification on page 7, paragraph [0020] recites that the gap between surfaces should be greater than the coherent length of the light source, typically no less than a few microns. A backlight illumination source providing illumination to the multilayer backlighting display optical film (*page 1, paragraphs [0001]-[0003]*). At least one of said first backlighting display component film or said second backlighting display component film is a brightness enhancement film, a polarization recycling film, diffuser or configured such that the optical structures of said component films are configured orthogonally, since Kimura discloses the same claimed structure.

Regarding Applicant's claims 2-4, Kimura discloses that the optical structures are, convex, concave and prisms (*figure 3*).

Regarding Applicant's claims 5-8 and 11-13, Kimura disclose that the raised spacing structures comprises at least one post or beam structure and has a height relative to the optical structures, said height being between about 0.1 and about 20 microns (*page 2, paragraph [0015]*)

Art Unit: 1794

*and figure 3*). The raised spacing structures have equal or unequal heights relative to the optical structures (*page 2, paragraph [0015] and figure 3*). The raised spacing structures occupy an area, said area being defined, as a percentage of a total area of the film surface upon which the raised spacing structures are disposed, said percentage being in a range between about 1 and about 50 percent (*page 2, paragraph [0015] and figure 3*).

Regarding Applicant's claim 9, Kimura discloses that the backlighting display component films have a thickness between about 0.006 and about 5 millimeters (*page 3, paragraph [0028]*).

Regarding Applicant's claim 10, Kimura discloses that the gap comprises at least one member selected from the group consisting of solid matter, fluid matter and combinations thereof (*page 4, paragraph [0042]*).

### ***Claim Rejections - 35 USC § 103***

13. Claims 2-13, 29-33 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrath (U.S. Patent No. 4,025,159) in view of Nilsen et al. (U.S. Patent No. 5,657,162).

McGrath discloses a multiplayer optical film (*cellular retroreflective sheeting, title*). The film comprises at least two component films (*bass sheet and cover film, col. 3, lines 25-26*). At least one of the component films (*bass sheet*) has an upper and lower surface (*figure 3*). The upper surface comprises a series of optical structures (*microspheres, col. 3, line 33*) and a plurality of raised spacing structures (*narrow intersecting bonds, col. 3, line 26*). The lower surface is essentially planar (*figure 3*). The component films are joined so as to constitute a single structure comprising at least one gap disposed between the component films (*figure 3*).

Art Unit: 1794

Furthermore, the gap is deemed to be greater than the coherent length of light used to illuminate the optical film since the reference discloses that same height for the spacing structures as claimed by Applicant. See the discussion below regarding claim 7. Furthermore, Applicant's specification on page 7, paragraph [0020] recites that the gap between surfaces should be greater than the coherent length of the light source, typically no less than a few microns.

McGrath fails to disclose that there is a second component film.

Nilsen discloses a retroreflective article with multiple prism locations (*title*). Figure 5 shows that multiple layers of retroreflective sheeting can be stacked to create different design patterns (*col. 5, lines 13-60*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to stack multiple layers of McGrath as taught by Nilsen in order to create different design patterns.

When layers of McGrath are stacked they will create the claim first and second component film structural arrangement.

The preamble/limitation "backlighting display" is deemed to be a statement with regard to the intended use and is not further limiting in so far as the structure of the product is concerned. In article claims, a claimed intended use must result in a ***structural difference*** between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

McGrath discloses that the optical structures are convex and concave structures (*microspheres, col. 3, line 33 and figure 3*). McGrath discloses that the optical structures are

Art Unit: 1794

prisms, since the reference discloses cube-corner elements can be interchangeable used with the microspheres (*col. 6, lines 13-20 and figure 7*). McGrath discloses that the raised spacing structures comprise at least one post-structure and/or at least one beam structure (*narrow intersection bonds, col. 3, line 26 and figures 1, 3 and 7*). McGrath discloses that the spacing structures have a height relative to the optical structures between about 0.1 and about 20 microns, since the reference shows in figure 3 that the spacing structure, i.e. narrow intersection bonds, have a height of half the diameter of the optical structures, i.e. microspheres, and the diameter of the microspheres is between 10 and 200 micrometers (*col. 5, lines 29-30*), which means that the height of the narrow intersection bonds is between 5 to 100 microns. McGrath discloses that the raised spacing structures comprise at least one post-structure (*narrow intersection bonds, col. 3, line 26 and figures 1, 3 and 7*). McGrath discloses that the component films have a thickness between about 0.006 and about 5 millimeters, since the reference discloses that the base sheet has a thickness of 75 micrometers (*col. 6, lines 60-61*) and the cover film has a thickness between 1 and 5 mils (*col. 5, line 14*), which together have a thickness of 100.4-203 micrometers or 0.1 to 0.2 mm. McGrath discloses that the gap comprises solid matter, fluid matter and combinations thereof, since the reference discloses that air, i.e. a fluid, in the gaps (*col. 3, lines 23-30*). McGrath discloses that the raised spacing structures have either equal or unequal heights relative to the optical structures (*figures 3 and 7*). Figure 3 in McGrath shows that the raised spacing structures occupy an area, the area is deemed to define a percentage of a total area of the film surface upon which the raised spacing structures are disposed. Furthermore, it can be seen from figure 1 that the percentage is in the range between about 1 and about 50.

Art Unit: 1794

***ANSWERS TO APPLICANT'S ARGUMENTS***

14. Applicant's arguments in the pre-appeal brief filed November 10, 2008 regarding the previous rejections of record have been considered but are moot due to the new grounds of rejection.

***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alicia Chevalier/  
Primary Examiner, Art Unit 1794  
7/6/2009

Application/Control Number: 10/671,846

Page 15

Art Unit: 1794